Alternative 2 Option A

Bunker Hill
Acid Mine Drainage
Disposal of Raw Sludge in CIA Disposal Beds
Order of Magnitude Cost Opinion

DATE: 11/22/2000
PROJECT NO.: 152215.FS.02
ESTIMATE BY: D. Bunte
N. Gulensoy

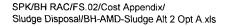
Order of Magnitude Cost Opinion	1			N. Gulensoy
			TOTAL	
			UNIT	TOTAL
DESCRIPTION	QTY	UNIT	COST	COST
Subgrade Stabilization	10,500	C. Y.	4.00	\$42,000
Liner Protection Sand	8250	C. Y.	10.00	\$82,500
Drain Rock	1,950	C. Y.	18.00	\$35,100
Ditch Lining Geotextile	21,200	S. Y.	1.65	\$34,980
GCL	18,100	S. Y.	4.05	\$73,305
H D P E Geomembrane	18,100	S. Y.	5.40	\$97,740
HDPEPipe, 10"	550	L. F.	23.00	\$12,650
Erosion Control Matting	11800	S.Y.	1.50	\$17,700
Perf Pipe, 4"	2000	L. F.	2.00	\$4,000
Perf Pipe, 6"	580	L.F.	3.00	\$1,740
HDPE Pipe, 6"	130	L.F.	2.50	\$325
Strip Drains	700	L. F.	1.75	\$1,225
Valves, 6" Knife Gate	2	Each	700.00	\$1,400
Valves, 10" Knife Gate	6	Each	1,000.00	\$6,000
Air/Vacuum Release Valve	1	Each	2,000.00	\$2,000
Valve Vault	6	Each	1,950.00	\$11,700
Water Tight Manhole	1	Each	3,500.00	\$3,500
Vertical Filtrate Drains	6	Each	4,000.00	\$24,000
Cleanouts	2	Each	750.00	\$1,500
Perimeter Road Embankment (not reduced)	28275	C. Y.	10	\$282,750
Chain Link Fence and Gates (not reduced)	1000	L.F.	12	\$12,000
Crushed Rock Surfacing (not reduced)	1500	C. Y.	15	\$22,500
SUBTOTAL				\$1,024,865
MISC ALLOWANCE	10%			\$102,487
SUBTOTAL			•	\$1,127,352
CONTINGENCY	30%			\$338,205
SUBTOTAL			•	\$1,465,557
MOBILIZATION	15%			\$219,834
CONSTRUCTION TOTAL			•	\$1,685,390
SALES TAX ON MATERIALS	5.0%			\$25,622
ENGINEERING AND SUPPORT	20%			\$337,078
CONSTRUCTION MANAGEMENT	8%			\$134,831
CAPITAL COST SUBSEQUENT BEDS TOTAL (ROUNDED)				\$2,180,000
ANNUAL O&M COST FOR OPERATING BED \$46,000				
NPV OF ANNUAL O&M COSTS (30 YEARS @ 7% INTEREST)				\$566,000
NPV OF INITIAL AND SUBSEQUENT BEDS & CLOSURES CAPITAL COSTS @ 7% INTERES1				\$6,859,000
TOTAL 30-YEAR PRESENT WORTH COST @ 7% INTEREST				\$7,425,000

NOTES:

Misc Allowance markup is to include items known to exist but cannot be quantified at this time. Contingency is for scope changes that are presently unforeseen.

Mobilization includes bonds, insurance, temporary facilities, health & safety, demobilization, etc.

NOTE: The above cost opinion is in November 2000 dollars and does not include escalation. The order of magnitude cost opinion shown has been prepared for guidance in project evaluation at the time of preparation. The final costs of the project will depend on actual labor and material costs, actual site conditions, productivity, competitive market conditions, final project scope, final schedule and other variable factors. As a result, the final project costs will vary from those presented above. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.



02/19/2001 4:09 PM